**Mucosal Protectants and Adsorbents**

* **Kaolin-pectin** formulations are popular for symptomatic therapy of diarrhea. Kaolin is a form of aluminum silicate and pectin (a carbohydrate extracted from the rind of citrus fruits). Although kaolin-pectin is claimed to act as a demulcent and adsorbent in the treatment of diarrhea (related to the binding of bacterial toxins [endotoxins and enterotoxins] in the GI tract), clinical studies have not demonstrated any benefit from its administration. *It may change the consistency of the feces but neither decreases the fluid or electrolyte loss, nor shortens the duration of the illness. Nevertheless, it is often administered to small animals, foals, calves, lambs, and kids.* Kaolin-pectin products may adsorb or bind other drugs administered PO and reduce bioavailability.
* **Activated charcoal** is derived from wood, peat, coconut, or pecan shells. The material is heated and treated in such a way that many large pores are formed, which dramatically increases the internal surface area. Activated charcoal is available in a variety of pore sizes. The formulations that are sold for drug and toxicant adsorption typically have pore sizes of 10–20 Å. *Activated charcoal is very effective for adsorbing bacterial enterotoxins and endotoxins that cause some types of diarrhea. It also adsorbs many drugs and toxins and prevents GI absorption, so it is a common nonspecific treatment for intoxications.* Activated charcoal is not absorbed, so overdose is not a problem.
* Although other “mucosal protectants” have questionable efficacy, **bismuth subsalicylate** is considered by many human gastroenterologists to be the symptomatic treatment of choice for acute diarrhea. Its efficacy has been proved in controlled clinical trials in people with acute diarrhea (enterotoxigenic*Escherichia coli* or “traveller's diarrhea”). *Bismuth adsorbs bacterial enterotoxins and endotoxins and has a GI protective effect*. The salicylate component has antiprostaglandin activity. Practically all of the salicylate is absorbed systemically when administered to dogs and cats. Some animals may dislike the taste of bismuth subsalicylate, and owners should be warned that it will turn the feces black. This may interfere with evaluating the feces for hemorrhage. Salicylate toxicosis is possible, especially in cats.